

REMARKS

Claims 1-17 and 19-40 were presented for examination and were rejected. In the present amendment, claim 17 has been amended. No new matter has been introduced. Upon entry of the present amendment, claims 1-17 and 19-40 will be currently pending in this application, of which claims 1, 9, 17, 25 and 32 are independent. Applicants submit that claims 1-17 and 19-40 are in condition for allowance.

The following comments address all stated grounds of rejection. Applicants traverse all rejections and urge the Examiner to pass the claims to allowance in view of the remarks set forth below.

CLAIM REJECTIONS UNDER 35 U.S.C. §101**I. Claims 17, 19-24 Rejected Under 35 U.S.C. §101**

Claims 17, 19-24 are rejected under 35 U.S.C. §101 as being directed to non-statutory subject matter. The Examiner cites paragraph [0093] of the specification and contends that system of claims 17, 19-24 are interpreted as being software only and therefore, non-statutory. Applicants respectfully submit that claims 17, 19-24 are directed to statutory subject matter.

Claims 17, 19-24 are directed to a system for adaptively filtering URL messages routed across a network. The system generates rules based on URLs within messages received and rejected by the system. The system comprises a learning engine storing rejected URLs in a trie structure, and maintains a frequency for each node associated with a URL component. This is readily understood by persons ordinarily skilled in the art to include a hardware element, such as memory or storage. Further, paragraph [0030] of the specification describes the memory which stores a number of data structures, thresholds, frequency counts and exception rules, and

paragraph [0090] cites that the system may be implemented via a combination of hardware and software. MPEP § 2106 states that “when functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized”. Since the systems of claims 17 and 19-24 are embodied as a combination of hardware and software which permits the function of their software components to be realized, these claims are therefore directed to statutory subject matter.

For at least these reasons, Applicants respectfully submit that claims 17, 19-24 are directed to statutory subject matter per 35 U.S.C. §101 and request that the rejections made pursuant to 35 U.S.C. §101 be withdrawn.

CLAIM REJECTIONS UNDER 35 U.S.C. §103

II. Claims 1-17 and 19-40 Rejected Under 35 U.S.C. §103

Claims 1-17 and 19-40 are rejected under 35 U.S.C. §103(a) as unpatentable over U.S. Patent No. 6,772,347 to Xie et al. (“Xie”) in view of U.S. Patent Publication No. 2005/0086262 to Balasubramanian (“Balasubramanian”) and further in view of U.S. Patent Publication No. 2004/0250124 to Chesla (“Chesla”). Applicants respectfully traverse these rejections. Claims 1, 9, 17, 25 and 32 are independent claims. Claims 2-8 depend on and incorporate all the patentable subject matter of independent claim 1, claims 10-16 depend on and incorporate all the patentable subject matter of independent claim 9, claims 19-24 depend on and incorporate all the patentable subject matter of independent claim 17, claims 26-31 depend on and incorporate all the patentable subject matter of independent claim 25, and claims 33-40 depend on and incorporate all the patentable subject matter of independent claim 32. Applicants submit that Xie,

Subramanian and Chesla, alone or in combination, do not teach or suggest each and every feature of the claimed invention.

A. Independent Claims 1, 9, 17, 25 and 32 Patentably Distinguished over Xie in view of Balasubramanian and further in view of Chesla

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. Claims 1 and 9 are directed to computer-implemented methods, claim 17 is directed to a system, claim 25 is directed to a computer program product, and claim 32 is directed to a computer-implemented method. Claims 1, 9, 17, 25 and 32 recite generating an exception rule for a URL component or a node associated with the URL component, responsive to the frequency of the URL component satisfying a set of constraints. Xie, Balasubramanian and Chesla, alone or in combination, fail to teach or suggest each and every element of the claimed invention.

Neither Xie, Balasubramanian nor Chesla, teach or suggest generating an exception rule to the rejection rule, responsive to the frequency of a URL component satisfying a set of constraints. In the Office Action, the Examiner admits that Xie does not disclose dynamically generated rules when it is determined that packet denial is greater than a desired threshold amount. The Examiner cites Chesla for this purpose. However, Chesla is directed to blocking traffic responsive to detecting anomalous traffic patterns indicative of an attack on a network (see paragraph [0032]). The frequency threshold in Chesla is used to reject messages and not to generate an exception to the rejected messages (see paragraphs [0032] and [0033]). In contrast, the claimed invention generates an exception rule to a rejection rule, and generates the exception rule responsive to the frequency satisfying a set of constraints. The claimed invention allows a message responsive to the exception rule after the frequency meets the constraints. Chesla does

the opposite – when the threshold is reached, it rejects the message. Thus, Chesla does not teach or suggest teach or suggest each and every element of the claimed invention.

The Examiner admits that Xie does not specify filtering based on URLs and URL descendents and cites Balasubramanian for this purpose. However, as with Xie and Chesla, Balasubramanian does not teach or suggest generating an exception rule to the rejection rule, responsive to the frequency of a URL component satisfying a set of constraints. Balasubramanian describes a web crawler system using predetermined rules to evaluate a URL string and decide whether the URL will be allowed or disallowed (see paragraph [0019]). Since the rules are predetermined, there is no dynamic generation of exception rules. Thus, Balasubramanian does not bridge any of the deficiencies with the Xie and Chesla references.

Since Xie, Balasubramanian and Chesla, alone or in combination, fail to teach or suggest each and every feature of the claimed invention, Applicants submit independent claims 1, 9, 17, 25 and 32 are patentable and in condition for allowance. Claims 2-8 depend on and incorporate all the patentable subject matter of independent claim 1. Claims 10-16 depend on and incorporate all the patentable subject matter of independent claim 9. Claims 19-24 depend on and incorporate all the patentable subject matter of independent claim 17. Claims 26-31 depend on and incorporate all the patentable subject matter of independent claim 25. Claims 33-40 depend on and incorporate all the patentable subject matter of independent claim 32. Thus, Applicants submit dependent claims 2-8, 10-16, 19-24, 26-31 and 33-40 are patentable and in condition for allowance. Therefore, Applicants respectfully request that the Examiner withdraw the rejection of claims 1-17 and 19-40 under 35 U.S.C. §103.

CONCLUSION

In light of the aforementioned amendments and arguments, Applicants contend that each of the Examiners rejections has been adequately addressed and all of the pending claims are in condition for allowance. Accordingly, Applicants respectfully request reconsideration, withdrawal of all grounds of rejection, and allowance of all of the pending claims.

Should the Examiner feel that a telephone conference with Applicants' attorney would expedite prosecution of this application, the Examiner is urged to contact the Applicants' attorney at the telephone number identified below.

Respectfully submitted,

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